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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	May 12	EXTEND option available in structure searching
NEWS	4	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS	5	May 27	New UPM (Update Code Maximum) field for more efficient patent SDIs in CAplus
NEWS	6	May 27	CAplus super roles and document types searchable in REGISTRY
NEWS	7	Jun 28	Additional enzyme-catalyzed reactions added to CASREACT
NEWS	8	Jun 28	ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG, and WATER from CSA now available on STN(R)
NEWS	9	Jul 12	BEILSTEIN enhanced with new display and select options, resulting in a closer connection to BABS

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:56:29 ON 30 JUL 2004

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.68	1.68

FILE 'REGISTRY' ENTERED AT 13:01:12 ON 30 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6
DICTIONARY FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

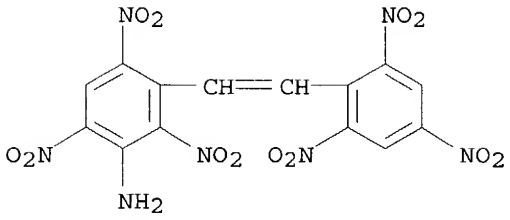
```
=> e hexanitrostilbene/cn
E1            1     HEXANITROSOBENZENE/CN
E2            1     HEXANITROSOSTILBENE/CN
E3            0 --> HEXANITROSTILBENE/CN
E4            1     HEXANITROTRIPHENYLMETHANE/CN
E5            2     HEXANIUM/CN
E6            1     HEXANIUM BROMIDE/CN
E7            1     HEXANO-6-LACTAM/CN
E8            1     HEXANO-6-LACTAM-N-METHYLDODECANO-12-LACTAM BLOCK COPOLYMER/C
                    N
E9            1     HEXANOATE/CN
E10           1     HEXANOATE ANION/CN
E11           1     HEXANOATE SYNTHASE/CN
E12           1     HEXANOATE SYNTHASE (ASPERGILLUS SOJAE STRAIN SU-1 GENE HEXA
                    SUBUNIT A)/CN

=> s hexanitrostilbene
L1           49 HEXANITROSTILBENE

=> e hexanitrostilbene/cn
E1            1     HEXANITROSOBENZENE/CN
E2            1     HEXANITROSOSTILBENE/CN
E3            0 --> HEXANITROSTILBENE/CN
E4            1     HEXANITROTRIPHENYLMETHANE/CN
E5            2     HEXANIUM/CN
E6            1     HEXANIUM BROMIDE/CN
E7            1     HEXANO-6-LACTAM/CN
E8            1     HEXANO-6-LACTAM-N-METHYLDODECANO-12-LACTAM BLOCK COPOLYMER/C
                    N
E9            1     HEXANOATE/CN
E10           1     HEXANOATE ANION/CN
E11           1     HEXANOATE SYNTHASE/CN
E12           1     HEXANOATE SYNTHASE (ASPERGILLUS SOJAE STRAIN SU-1 GENE HEXA
                    SUBUNIT A)/CN

=> d l1

L1   ANSWER 1 OF 49  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   51168-33-3  REGISTRY
CN   Benzenamine, 2,4,6-trinitro-3-[2-(2,4,6-trinitrophenyl)ethenyl]- (9CI)
     (CA INDEX NAME)
OTHER NAMES:
CN   3-Amino-2,2',4,4',6,6'-hexanitrostilbene
MF   C14 H7 N7 O12
LC   STN Files:   BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB
         (*File contains numerically searchable property data)
DT.CA  CAplus document type:  Journal; Patent
RL.P   Roles from patents:  RACT (Reactant or reagent)
RL.NP  Roles from non-patents:  RACT (Reactant or reagent)
```



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
=> e-n-methylpyrrolidone/cn
E-N-METHYLPYRROLIDONE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> e n-methylpyrrolidone/cn
E1            1     N-METHYLPYRROLIDINYLHYGRINE A/CN
E2            1     N-METHYLPYRROLIDINYLHYGRINE B/CN
E3            1 --> N-METHYLPYRROLIDONE/CN
E4            1     N-METHYLPYRROLIDONE DIETHYL ACETAL/CN
E5            1     N-METHYLPYRROLIDONE DIMETHYL ACETAL/CN
E6            1     N-METHYLPYRROLIDONE HYDROCHLORIDE/CN
E7            1     N-METHYLPYRROLIDONE-MELAMINE-FORMALDEHYDE POLYMER/CN
E8            1     N-METHYLPYRROLIDONE-OCTANOIC ACID VINYL ESTER COPOLYMER/CN
E9            1     N-METHYLPYRROLIDONE-POLY(ETHYLENE GLYCOL)-TOLYLENE DIISOCYAN
                    ATE-TRIETHYLAMINE POLYMER/CN
E10           1     N-METHYLPYRROLIDONE-POLYETHYLENE GLYCOL-POLYETHYLENE GLYCOL
                    DIMETHACRYLATE COPOLYMER/CN
E11           1     N-METHYLPYRROLIDONE-TITANIUM TETRACHLORIDE COMPLEX (1:1)/CN
E12           1     N-METHYLPYRROLIDONE-VINYL BUTYRATE COPOLYMER/CN

=> s e3
L2            1 N-METHYLPYRROLIDONE/CN

=> d l2 ibib ab
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'AB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats.  The predefined substance formats
are:  (RN = CAS Registry Number)

REG     - RN
SAM     - Index Name, MF, and structure - no RN
FIDE    - All substance data, except sequence data
IDE     - FIDE, but only 50 names
SQIDE   - IDE, plus sequence data
SQIDE3  - Same as SQIDE, but 3-letter amino acid codes are used
SQD     - Protein sequence data, includes RN
SQD3    - Same as SQD, but 3-letter amino acid codes are used
SQN     - Protein sequence name information, includes RN
```

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):e n-methylpyrrolidone/cn
'E' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'N-METHYLPYRROLIDONE/CN' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG   - RN
SAM   - Index Name, MF, and structure - no RN
FIDE   - All substance data, except sequence data
IDE   - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD   - Protein sequence data, includes RN
SQD3   - Same as SQD, but 3-letter amino acid codes are used
SQN   - Protein sequence name information, includes RN

CALC   - Table of calculated properties
EPROP - Table of experimental properties
PROP   - EPROP and CALC

Any CA File format may be combined with any substance format to

obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

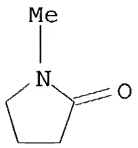
For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):end

=> d l2

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 872-50-4 REGISTRY
CN 2-Pyrrolidinone, 1-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Methyl-2-pyrrolidinone
CN 1-Methyl-2-pyrrolidone
CN 1-Methyl-5-pyrrolidinone
CN 1-Methylazacyclopentan-2-one
CN 1-Methylpyrrolidone
CN AgsolEx 1
CN M-Pyrol
CN Microposit 2001
CN N 0131
CN N-Methyl-α-pyrrolidinone
CN N-Methyl-α-pyrrolidone
CN N-Methyl-γ-butyrolactam
CN N-Methyl-2-ketopyrrolidine
CN N-Methyl-2-pyrrolidinone
CN N-Methyl-2-pyrrolidone
CN N-Methylbutyrolactam
CN **N-Methylpyrrolidone**
CN NMP
CN NSC 4594
CN Pharmasolve
CN Pyrol M
CN SL 1332

FS 3D CONCORD
DR 53774-35-9, 57762-46-6, 26138-58-9
MF C5 H9 N O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Conference; Dissertation; Journal; Patent; Preprint; Report
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10954 REFERENCES IN FILE CA (1907 TO DATE)
157 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
10961 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s 51168-33-3
L3 1 51168-33-3
(51168-33-3/RN)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	16.60	18.28

FILE 'CAPLUS' ENTERED AT 13:07:27 ON 30 JUL 2004

FILE COVERS 1907 - 30 Jul 2004 VOL 141 ISS 6
FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l3
L4            3 L3

=> s l2
L5        10963 L2

=> s l4 and l5
L6            0 L4 AND L5

=> s l1
L7          411 L1

=> s l2
L8        10963 L2

=> s l7 and l8
L9            6 L7 AND L8

=> d l9 ibib ab 1-6

L9   ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:207752  CAPLUS
DOCUMENT NUMBER:          140:220185
TITLE:                    Crystallization of hexanitrostilbene
AUTHOR(S):                Jalovy, Zdenek; Marecek, Pavel; Dudek, Kamil
CORPORATE SOURCE:         Dep. THeory and Technol. Explosives, Univ. Pardubice,
                          Czech Rep.
SOURCE:                   New Trends in Research of Energetic Materials,
                          Proceedings of the Seminar, 6th, Pardubice, Czech
                          Republic, Apr. 22-24, 2003 (2003), 160-165.
                          Editor(s): Vagenknecht, Jiri. University of
                          Pardubice: Pardubice, Czech Rep.
                          CODEN: 69DZTA; ISBN: 80-7194-543-9
DOCUMENT TYPE:            Conference
LANGUAGE:                 English
AB   A literature survey of methods for hexanitrostilbene (HNS) crystallization is
     presented.  Crystallization of HNS from N-methylpyrrolidinone, cyclohexanone,
DMF,
     and nitric acid are part of the exptl. section.  Cyclic heating-cooling
     crystallization from DMF produces HNS with bulk d. 0,28 g/cm3.
Crystallization from
     nitric acid produced HNS with bulk d. 0,56 g/cm3 and acidity 0,028% and
     0,083%. resp. with dependence on the acidity method determination
REFERENCE COUNT:          12    THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

L9 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:571976 CAPLUS
DOCUMENT NUMBER: 139:199504
TITLE: Contamination of explosive materials with N-methylpyrrolidin-2-one (NMP)
AUTHOR(S): Bellamy, Anthony J.; Brzoska, Edward
CORPORATE SOURCE: Department of Environmental and Ordance Systems, Royal Military College of Science, Cranfield University, Swindon, UK
SOURCE: Journal of Energetic Materials (2003), 21(1), 43-55
CODEN: JOEMDK; ISSN: 0737-0652
PUBLISHER: Taylor & Francis Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several explosive materials, viz., triaminotrinitrobenzene, (TATB), hexanitrostilbene, (HNS), and 1,1-diamino-2,2-dinitroethene (FOX-7), are processed by using solvents. It is determined by using 1H NMR and head-space GC-MS that TATB, HNS, and FOX-7 are contaminated by 0.15-0.2, 0.1-0.5, and 0.1-0.2 wt% NMP, resp. Attempts to reduce the level of contamination by a variety of methods were only partially successful.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:563588 CAPLUS
DOCUMENT NUMBER: 119:163588
TITLE: Purification of 2,2',4,4',6,6'-hexanitrostilbene (HNS)
INVENTOR(S): Bellamy, A.
PATENT ASSIGNEE(S): Nobel Kemi AB, Swed.
SOURCE: Swed., 9 pp.
CODEN: SSXXAY
DOCUMENT TYPE: Patent
LANGUAGE: Swedish
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SE 468435	B	19930118	SE 1988-362	19880205
SE 8800362	A	19880722		
SE 468435	C	19930513		

PRIORITY APPLN. INFO.: SE 1988-362 19880205
AB The process comprises dissolving the HNS in N-methylpyrrolidone and crystallizing a less impure product from the solution Alternatively, the solvent may be C6H5Cl and/or PhMe. The HNS does not change its properties upon long-term exposure to high temps., and is used as explosive in space technol. and oil and gas exploration. The purity of the recrystd. HNS meets US military standard WS 5003 F.

L9 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:117805 CAPLUS
DOCUMENT NUMBER: 110:117805
TITLE: Production of hexanitrostilbene (HNS) from trinitrotoluene oxidation by transition metal compound
INVENTOR(S): Golding, Peter; Jayaweera-Bandara, Asoka Manith; Duffin, Henry Charles
PATENT ASSIGNEE(S): United Kingdom Secretary for Defence, UK
SOURCE: Brit. UK Pat. Appl., 16 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2205312	A1	19881207	GB 1987-12834	19870601
WO 8809784	A1	19881215	WO 1988-GB420	19880526
W: AU, GB, NO, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8817944	A1	19890104	AU 1988-17944	19880526
AU 606710	B2	19910214		
EP 385990	A1	19900912	EP 1988-904587	19880526
EP 385990	B1	19940105		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 99667	E	19940115	AT 1988-904587	19880526
EP 294131	A1	19881207	EP 1988-304905	19880531
EP 294131	B1	19920909		
R: ES, GR				
ES 2043819	T3	19940101	ES 1988-304905	19880531
NO 8900375	A	19890329	NO 1989-375	19890130
NO 169281	B	19920224		
NO 169281	C	19920603		
US 5023386	A	19910611	US 1990-457681	19900104

PRIORITY APPLN. INFO.:

GB 1987-12834	19870601
EP 1988-904587	19880526
WO 1988-GB420	19880526

OTHER SOURCE(S): CASREACT 110:117805

AB Hexanitrosilbene (HNS) is prepared by oxidizing TNT with a halide, a sulfate, or a nitrate of a transition metal Cu(II) or Co(III) in a polar aprotic solvent or a mixture of polar aprotic solvents and a base, e.g. an organic amine having a pKa 4.5-6.5 or a salt of a carboxylic acid having a Ka 2 + 10-4-10-6. The TNT and transition metal compound are in the mol ratio 1:0.5 and the TNT and base are in molar ratio 1:2 to 1:8. The solvent has beta value 0.5-1.1 and is selected from the group consisting of DMF, pyridine, N-methylpyrrolidone, hexamethylphosphoramide, dioxane, N,N-dimethylacetamide, DMSO, HMPA, di-Me propylene urea, dimethylethylene urea. The reaction temperature is kept at 5-100° and the reaction time is 10-60 min. Thus, 1 g TNT and 0.9 g anhydrous CuCl2 were dissolved in 30 mL DMSO at 25°, and 2.1 g Na benzoate was added with stirring. The mixture was maintained at 25° for 30 min with stirring, excess H2O was added, the nonsticky HNS solid formed was filtered off and washed with H2O and then with MeOH. This HNS had a m.p. 308-316° which was acceptable for most explosives applications.

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:630521 CAPLUS
DOCUMENT NUMBER: 109:230521
TITLE: Process for the production of the explosive 2,2',4,4',6,6'-hexanitrostilbene in its purified form (HNS II)
INVENTOR(S): Bellamy, Anthony
PATENT ASSIGNEE(S): Nobel Kemi AB, Swed.
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 277386	A2	19880810	EP 1987-202613	19871223
EP 277386	A3	19900816		
EP 277386	B1	19950614		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
SE 8700212	A	19880722	SE 1987-212	19870121

SE 468434	B	19930118		
SE 468434	C	19930513		
ES 2074044	T3	19950901	ES 1987-202613	19871223
IN 172139	A	19930417	IN 1987-DE1147	19871229
ZA 8800150	A	19880831	ZA 1988-150	19880111
IL 85103	A1	19921201	IL 1988-85103	19880114
IL 101852	A1	19940826	IL 1988-101852	19880114
JP 63301846	A2	19881208	JP 1988-8209	19880118
JP 2569345	B2	19970108		
BR 8800160	A	19880830	BR 1988-160	19880119
NO 8800233	A	19880722	NO 1988-233	19880120
NO 169770	B	19920427		
NO 169770	C	19920805		
AU 8810620	A1	19880804	AU 1988-10620	19880120
AU 611125	B2	19910606		
ES 2007786	A6	19890701	ES 1988-119	19880120
CA 1339470	A1	19970923	CA 1988-556901	19880120
NO 9104749	A	19880722	NO 1991-4749	19911203
NO 175145	B	19940530		
NO 175145	C	19940907		

PRIORITY APPLN. INFO.:	SE 1987-212	19870121
	IL 1988-85103	19880114
	NO 1988-233	19880120

AB The title explosive (HNS) is prepared in its standard high-purity form (HNS II) by recrystn. of its raw, impure form (HNS I) from N-methylpyrrolidone (I), followed by ultrasonication of the resulting crystals. Raw HNS I (400 g) was dissolved in 2250 mL I at 125°, and 2250 mL PhCl (optional cosolvent) was added over 50 min at 125°. Cooling in air to 65° and in ice-water to 10°, followed by filtration and MeOH washes, gave 85.5% yield of HNS I with bulk d. 0.48 g/cm3. Similarly crystallized HNS I (bulk d. 0.50 g/cm3) was suspended in H2O containing 6% MeOH (300 g HNS/3500 mL solvent) and sonicated for 1 h to give HNS II with bulk d. 0.94 g/cm3.

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1975:100890 CAPLUS
DOCUMENT NUMBER:	82:100890
TITLE:	Solubilities of explosives. Dimethylformamide as general solvent for explosives
AUTHOR(S):	Sitzmann, Michael E.; Foti, Stephen C.
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AB The solubility of representative explosive (RDX [121-82-4], HMX [2691-41-0], 2,2',4,4',6,6'-hexanitrostilbene [**20062-22-0**], and 2,4-diamino-1,3,5-trinitrobenzene [1630-08-6]) in various solvents is determined to establish a general solvent for explosives. Dimethylformamide (I) [68-12-2] is the best solvent for HMX although it forms a complex. Butyrolactone [96-48-0], Me2SO [67-68-5], or their mixts. can be used for HMX. The solubilities of NH4 salts in I also are given.